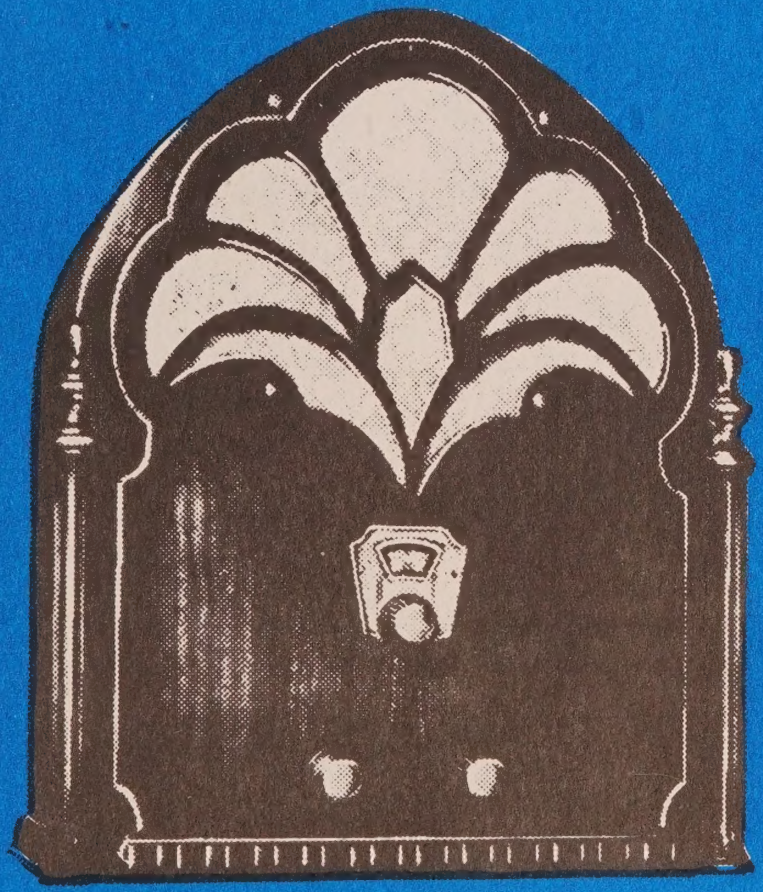
The Antique Radio Gazette

OFFICIAL PUBLICATION OF THE ANTIQUE RADIO CLUB OF AMERICA

VOL. 13 FALL 1985 No. 3



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It is our intention to have the Gazette published as closely as possible to the following dates:

March 31 — June 30
September 30 — December 30

The closing dates for receiving material of all kinds in order to have it appear in the next issue would be:

February 15 — May 15
August 15 — November 15

The Antique Radio Gazette is published quarterly in Madison, Connecticut.

Yearly dues of $10.00 U.S. currency are payable to ARCA January 1, of each year for members in the USA, Canada, and Mexico. Overseas dues are $12, which includes airmail postage.

The Antique Radio Club of America was incorporated in the State of Kentucky, in September, 1972. The first meeting was held at the Marriott Motor Inn, Washington, D.C., on September 23, 1972. At this meeting, by-laws were read and approved and directors selected. We feel that the inception of this Club is a giant step in bringing together those individuals whose chief interest lies in the area of early radio. We invite all collectors and historians of the subject to join the Club. A note to William E. Denk, Secretary, 81 Steeplechase Road, Devon, Pennsylvania 19333, will bring you an application blank by return mail.

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President's Page

The June, 1985 annual convention of ARCA was held at Grand Island, New York under the sponsorship of the Niagara Frontier Wireless Association. Over 120 collectors registered, and with wives and friends there were over 200 in attendance. As is often the case, there was good news and bad news. The good news is that the attendees seemed to have a very good time, from what many of them told me. The Holiday Inn facilities were excellent. The flea market and auction saw a lot of goodies change hands. The NFWA antique radio display was outstanding. The bad news is that the attendance was less than expected based on the level of interest expressed by mail before the convention, resulting in a small financial loss for ARCA. Lessons were learned that will be reflected in the planning and operation of future conventions, to assure that our conventions are self supporting. It is not the intent that the general membership subsidize the convention. I would like to publicly thank again John Meyers, the president of NFWA, and his committee, particularly Felicia and Jim Kreuzer, the convention chairpersons. Everyone worked hard to make the convention a success.

Several important actions occurred at the Board of Directors meeting and at the annual members meeting, held during the convention.

The Board accepted the invitation of John Caperton to hold the 1986 convention at Louisville, KY. It will be held at the Holiday Inn, Rivermont Centre, during June 12 to 14. John hosted the ARCA convention there five years ago, and it was a great success. A number of us will be helping John plan and run the convention. If any of you would like to help in any way, let John or me know of your willingness. A lot of help is needed since there is not a local club in Louisville.

At the members annual meeting, the results of the mail vote for officers, supplemented by vote of those members present who had not voted by mail, was presented by Mr. Moore, representing the nominating committee of Messrs. Caperton, Renne, and Moore. The following were elected to office effective July 1, 1985: President, Jim Troe; Executive Vice President, Lloyd McIntyre; Vice President, Joe Willis; Treasurer, Bill Denk; Secretary, Jane Denk; Recording Secretary, Marilyn Johnston; Members of the Board, Les Rayner, James Eddington.

There was considerable discussion at both the Board meeting and at the members' meeting about the financial condition of the club. It is now costing more to print and mail the Gazette than we take in in dues, even though we continue to grow in membership at a healthy rate. (We now have over 700 paid up members.) At the Board meeting a committee was established to help John Drake, our editor, find ways, if possible, to reduce the costs of printing the Gazette, without sacrificing quality. At the members meeting it was unanimously voted to raise the dues to $12 per year, effective January 1, 1986.

At the members meeting it was unanimously agreed to accept paid advertising in the Gazette, for a one year trial. The advertising is to be printed on an insert page, not bound into the Gazette. The charge for advertising is to be such as to provide extra income for the Club. Details will be provided in the next issue.

We have been seeking new authors for the Gazette and a number of you have jumped in and furnished us good articles. I am sure that those authors wonder if their time and effort was worth it, since they seldom hear from anyone. If you like an article, let's encourage the

authors by dropping them a line to tell them so. To help, we will henceforth include the address of the author with the article. I for one sure do thank each and everyone of you who have taken the time to prepare an article for the education and sometimes amusement of your fellow members.

See you at Canandaigua.

Jim

Midget Capital of the World

In the fall of 1983, the ARCA Gazette had an article by Dave Friedberg entitled "The Coming of the Midget." Friedberg said in that article ". . . starting toward the very end of 1929 . . . Southern California radio manufacturers introduce a 'compact' radio know as the Midget . . . . ." By mid 1930 Los Angeles had become the Midget Capital of the World. A listing of midget set manufacturers in Radio Retailing of Sept., 1930, shows 44 set manufacturers, of which 22 were in the Los Angeles area. Eastern manufacturers including Philco, Crosley and A.K. were taking notice and toward the end of 1930, they were rushing their own midget products to market.

To show the scope and quantity of midget makers, the author has identified nearly 60 advertised radio set names in the Los Angeles area in the 1930-31 period. The listing includes manufacturers and assemblers. At least 10 manufacturers advertised both a set for sale and a chassis and speaker for sale. The latter allowed an "assembler" to buy a chassis and speaker from a source, purchase his own cabinet, put on a name tag (his own or the retailer's) and sell to the retailer. There was a big business in assembling sets in 1930 and 1931 in Los Angeles, and conditions were hectic if not chaotic at times. Among the newly established radio manufacturers' personnel, there was some restlessness. A desire to get a better job or strike out on one's own caused some engineers and sales personnel to change companies.

In smaller companies, a production quantity would typically consist of a run of 1,500 sets. The second batch of radios, weeks later, might bear different features. This practice led to many variations of models in those years. The local community knew that Gilfillan was the sole RCA license holder in Southern California. Any new manufacturer who hoped to stay in business was faced with being "legitimate" or the possiblity of being sued for patent infringement. Being "legit" meant building your chassis at the Gilfillan plant. There was an RCA royalty payment as well as Hazeltine and Latour fees and a Gilgillan Bros. space rental cost. Advance Electric was one of the first Los Angeles radio manufacturers to have their chassis made at the Gilfillan plant. This was in early 1929.

Some small manufacturers found that by operating "low key," they might operate for months before possibly being taken to court. There was at least one attempt to use fake RCA licensing tags. The enforcement wheels of the local RCA observation organization were rumbling and ever present, but for more than one reason law suits (injunctions) were not always initiated immediately when a new manufacturer was spotted building radios at his own plant.

References in early magazine literature of 1930-1931 suggested about one half of the local manufacturers were "legit." In 1931, a Radio Industries article stated that about 11,000 sets per month were passing around the Gilfillan plant. At 7½% royalty payment to RCA that would be approximately $1.00 per set or $11,000 per month (a potential loss of nearly $120,000 royalty loss to RCA in a year). When a radio manufacturer was successfully sued by RCA, the judgment often included back royalties, which RCA did not

always collect.

A Radio Industries article in May, 1931, summarized the "legals" banding together and approaching the part manufacturing sales reps (who sold parts to the manufacturers) to complain that they (the "legals") should be sold parts at a reduced price to help compensate for having to pay approximately $3.10 per set royalty and manufacturing space costs to Gilfillan. After all, this was a burden on the "legits' " abilities to price their sets competitively on the open market place. This approach of the "legals" failed miserably.

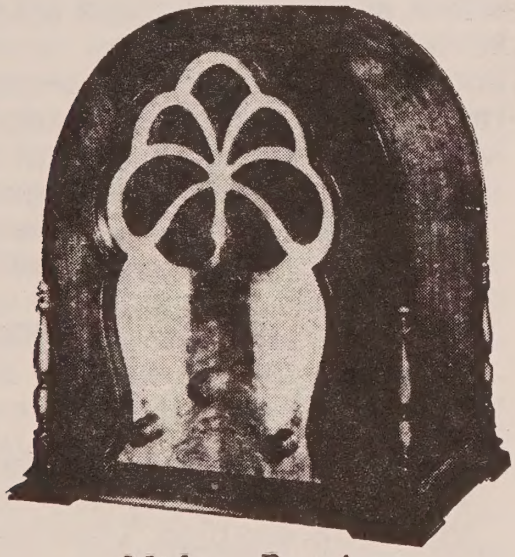
Illegals, legals, chassis makers, cash and carry, first to market, key people leaving the companies and other labels of a dynamic and constantly churning environment made for an interesting and entangled market place in Los Angeles, the Midget Capital of the World.

Floyd A. Paul
1545 Raymond
Glendale, CA 91201

1930-1931 Los Angeles Midget Radio Sources*

Adams, Advance, Amer. Labs, Arcadia, Austin, Avalon, Brown & Manhart, Calif., Cardinal, Champion, Chief, Colbliss, Consolidated, Crane, Crowe, Custom Built, Davidson-Haynes, DeForest, Deluxe, Dwarf, Echophone Elect. Products, Elmore-Lambing, E L Rey, Embassy, Flint, Gilbert, Hayden, Hollywood, Hoover, Horn, International, Jackson Bell, Keller Fuller, Kemper, Kenwood, Long's, Los Angeles, Master, Masterola, McGrew-Austin, Mission Bell, Noellen, Pacific Coast, Patterson, Peerless, Plymouth, Powell, Seeley, Taylor Travers, Trinity, Trojan, U.S. Apex, Waltham, Westerner, Zaney-Gill.

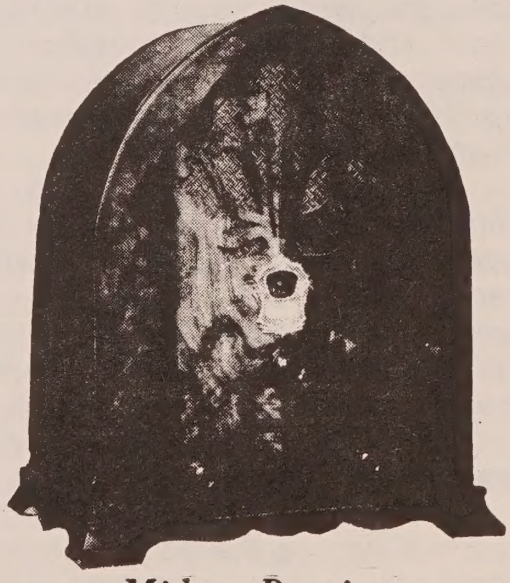
*Information from Radio Retailing, Sept. 1930, Radio Industries, several issues of 1930 & 31, Western Music and Radio Trades Journal, several issues of 1930 and 1931.



Midget Receiver

Description—This model No. 69 superheterodyne midget receiver utilizes eight tubes, which include three –24 screen-grid tubes, two –27 type tubes, two –45 type tubes and one –80 type rectifier tube. It is equipped with a full-range tone control and a Magnavox dynamic speaker. A highly polished, matched walnut cabinet with a recessed panel of burl walnut houses the receiver chassis and reproducer.

Maker—Jackson-Bell Company, Los Angeles, Calif.



Midget Receiver

Description—A new model No. 90 Radiette nine-tube superheterodyne receiver offering several features usually encountered only in larger type receivers. It is equipped with push-pull audio amplification using two –45 type tubes, an antenna pre-selector, local-distance switch, tone control and phonograph connection.

Maker—Keller-Fuller Mfg. Co., Ltd., 1573 West Jefferson Blvd., Los Angeles, Calif.

MEL'S CORNER

As time rolls by, we see the older, knowledgeable collectors passing on under the sickle of old Father Time reaping his harvest. The great days of the early teens and twenties, as radio progressed in leaps and bounds, are memories that will not be forgotten!

Many thanks to the historians who have spent the time and energy to document the birth and growth of the radio industry. The past is prologue to the future. It is gratifying to see the ever-increasing number of new and younger generation becoming involved in the collection of artifacts and documentation of the early days.

But where — many ask — do you find these items? Museums are aware of the interest in radio displays and more of these are coming on stream. Collectors travel many miles to view what has been preserved and research files for identifications. Libraries are a great help to most in remote areas.

The Antique Radio Clubs now spread across the country are the best way to meet collectors of similar interests and to acquire items that are passed along. Older collectors donate many fine items to museums but then there is the question of duplicates or items badly in need of restoration. Here is a source collectors can be involved with. We often hear the expression, "These old items being given have to go into the right hands to be appreciated and preserved."

There are, of course, a number of dealers solely interested in the monetary value of old items. However, sooner or later they stash away some of the better ones in their own personal collections. Eventually these move on to some lucky collector.

Not many years ago antique stores had little or no interest in old radios. Not so today! It is rare to find any of the really early items in these stores as most are passed up for pure junk! But sets of the late twenties, thirties and on up the line to now are being dug out. Cathedrals and Tombstone radios, and even some of the better floor model consoles, are now becoming quite popular.

Antique stores want them in working order to command higher prices. We know of a number of retired radio technicians who have added to their income by restoring these radios for such stores. Average restoration runs approximately fifty dollars, more or less. The retiree has a ball fixing these old sets, as well as the income! Parts and tubes for these are fairly obtainable.

The AWA and ARCA members will again be meeting in the Mecca of Antique Radio atmosphere at Canandaigua, New York this September. This is the grand event of the year and we hope to see you there! !

CHEERIO! ! !

Obituary Notice

Dave Brodie, W6PGQ, of Menlo Park, CA, one of the founders of the CHRS, has died. Dave was a great correspondent and dues payments always had a cheerful letter accompanying them. Dave was a 10 year member of ARCA.

Collectors needing replica parts have consulted Keith Parry, Granada Hills, California, who was an excellent source of supply.

We are sorry to hear that Keith passed away in July and he will be truly missed.

The Regency TR-1 All-Transistor Radio

The following article is taken from an interview with Richard Koch of Regency Electronics on March 10, 1983.

Through cooperative efforts of Texas Instruments and Industrial Development Engineering Associates, the first all-transistor radio arrived on the market in time for the 1954 Christmas Season.

It was a true "pocket size" radio, measuring three inches wide, five inches long and only one and one-quarter inch thick, weighed 12 ounces and sold for $49.95 on the retail market, less the 22½ volt hearing-aid battery.

Advertised as the World's Smallest and lightest weight radio, it did actually fit in the pocket of an Arrow shirt of the day, but not in the pocket of a discount store shirt. The plastic case was offered in six colors and a leather carrying case was optional for $3.95. Another option was the Regency Earphone priced at $7.50. The station selector dial was designed to be flush with the case and a small edgewheel knob was provided for the volume control and battery switch.

Texas instruments were ready for large-scale production of transistors in 1954 and considered building a radio for the market themselves. However, cost estimates of over $100.00 retail price discouraged management and it was decided not to produce the set themselves. Industrial Development Engineering Associates (I.D.E.A.) Regency Division entered the picture at this point in time. An aggressive company since its founding in September of 1945, I.D.E.A. had the design and production capacity to handle the job of producing a transistor radio within a very short time period, with the resulting increase in sales for the Texas Instruments transistor market.

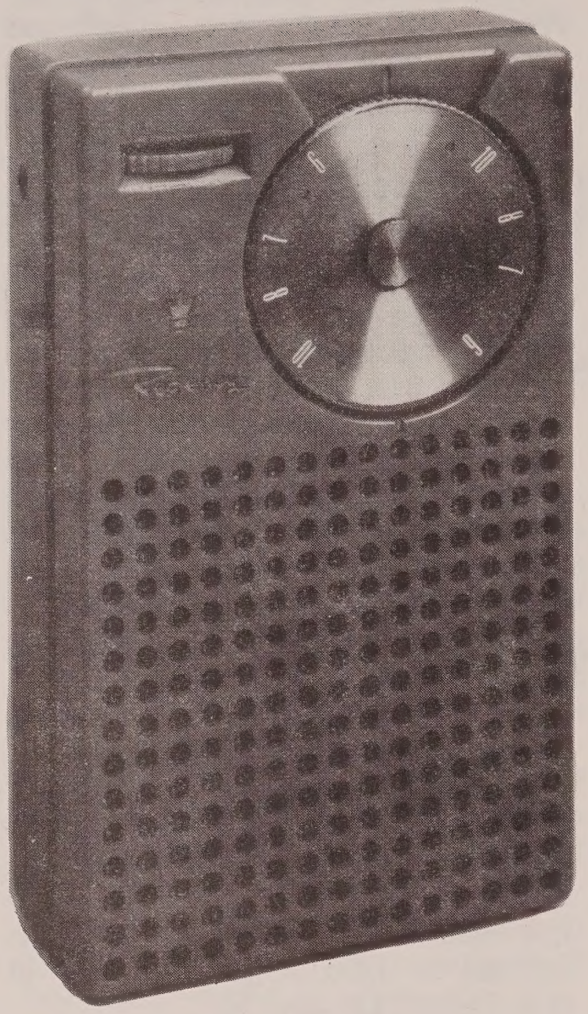
Richard Koch of I.D.E.A. and Roger Webster of Texas Instruments worked together, with their respective staffs, in matching the early transistors available to a practical circuit design, which later became the Regency TR-1. Texas Instruments built a six transistor prototype board in the spring of 1954. Design directions were formalized in late June and bench work began at Regency Division the first week in July. By this time, the transistor second detector had been replaced by a diode. This reduced the number of transistors to five, which was an important step for control of costs. Next, parts were saved and current drain from the battery was reduced by utilizing bias voltage for the I.F. Stages that was already available in the circuit of the audio output stage.

By August, a new single transistor oscillator-mixer circuit was developed, reducing the number of transistors to four. Both the biasing circuit and the oscillator-mixer circuit were registered as I.D.E.A. patents by the U.S. Patent Office.

Introduction of the TR-1 was one of the best kept secrets in the Industry. Competitors were caught short and required several months of development and tooling in order to catch up with the introduction of the transistor radio.

The plastic case was the last item to be tooled and was not ready until October, just in time for the Christmas Season introduction. The case was tooled in Chicago and was molded in Indiana.

Because of the new circuitry and compact size, almost every component in the set had to be designed and produced by the various component suppliers. Jensen designed the compact 2¾ inch dynamic speaker. The new Centralab Flatcaps were used. CTS supplied the miniature volume control, but was unable to tool a battery switch for the small space available. To clear this hurdle, I.D.E.A. designed a spring actuator



switch in front of the volume control, which was operated by a lobe or cam molded on the shank of the volume control edgewheel knob.

Raytheon supplied the original CK706 diode detector. Cornell Dubilier supplied sample low voltage electrolytics in a miniature design for the original T.I. prototype. However, when production quantities were needed, C.D. had not set up a production line for this item. I.D.E.A. then contacted a company in Nashville, Tennessee who supplied a miniature electrolytic capacitor in a phenolic impregnated paper tube. At a later date, the first paper tube capacitors were found to have a very short life, sometimes drying up as early as six months. This problem was resolved with the introduction of ceramic package electrolytics by I.E.I. Company.

Low impedance antenna coils were not available on the market at that time, so Regency Division wound their own. I.D.E.A. designed and Vokar produced the special miniature 262Kc I.F. transformers. This low I.F. frequency was required because of a 3 to 6 Db loss per stage at the standard 455 Kc with the available Germanium grown junction transistors. As soon as transistors with higher gain and better frequency response were available, the I.F. frequency was changed to the standard 455 Kc. The first Regency set to make this change was the Model TR-4 designed by Robert Liggett.

Radio Condenser Company tooled and produced the special compact two-section variable tuning capacitor with 135 MMF in the antenna section and 110 MMF in the oscillator section, both with standard open plates. Since they had no previous production experience with forming a narrow 15/16 inch condenser frame, an end thrust bearing adjustment was provided for first production parts as a precautionary measure. Two trimmers were also included on the small frame. Spacing of the plastic case was so close that a round depression had to be molded into the inside of the lid in order to provide clearance for the top of the adjusting screw. Early production sets may be identified by this adjusting screw and case depression.

As with any new and radical design, there were many problems with first production. Board fail-out was as high as 50% at the beginning. Because of the new board design, all new test fixtures were required. Spring loaded phono needles were used for test stations. A three position ferris wheel solder station was designed and built for board soldering.

Two market areas were selected for the TR-1 introduction, New York City and Los Angeles. The new sets were so popular that they began to show up on the black market in Boston and other cities.

Producing enough quality tran-

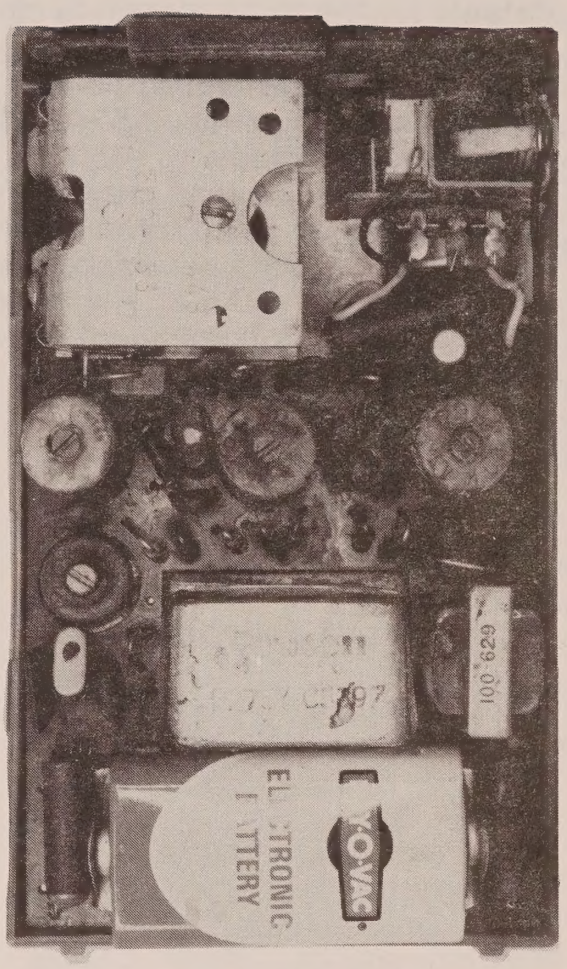
sistors in order to reduce costs was a major problem for Texas Instruments at that time. The original purchase order from Regency Division to T.I. was for one hundred thousand kits of four per kit at the price of ten dollars for each kit. Kits were matched and color coded by Texas Instruments before shipping to Regency Division. In order to unilateralize the I.F. stages, the R-C networks were varied according to the transistor color codes.

With the advent of increased demand and increased production, transistor prices soon came tumbling down.

The Proceeding of the Institute of Radio Engineers for December of 1954 carried an article on the first transistor radio and pictured the TR-1 beside a teacup on the front cover.

Approximately one year later the model number was changed to TR-IG with a change in the tuning knob design and a change in the audio output to a PNP transistor. Prior to this time all four were grown junction NPN types. The battery power remained 22½ volts. The standard 2 inch by one inch by 5/8 inch 9 volt battery was not used until introduction of the Model TR-4. The first design required a 22½ volt battery for adequate audio output with the grown junction transistors available at that time.

The Model TR-6 transistor set was the next model introduced in late 1955, also designed by Richard Koch. It was a larger set, measuring 7 inches by 5 inches by 3 inches deep. Included was a large good quality five inch speaker and a push-pull audio output stage for good power. It came in a genuine leather case with a leather handle. A most interesting story is connected with the design of the TR-6. It is probably the most rapid design of a successful production radio set on record. Richard Koch, Chief Engineer, and Robert Cox, Director of Purchases, sat down together one afternoon



after working hours and designed the complete TR-6, including the list of materials and components for purchasing, in less than two hours time. It is the first set to use a 9 volt power source in the form of a large rectangular battery, Burgess number C6X. The front end of the set is similar to the TR-1, using NPN transistors for the mixer-oscillator and the two 262Kc I.F. stages. For the audio output stages, a PNP driver is transformer fed into a pair of PNP outputs in a Class B audio circuit, resulting in a very good performing radio set.

Raytheon was next on the market with a larger transistor set than the TR-1 in 1955, followed by Bulova, General Electric, RCA, Mitchell and others with various sizes of miniature sets.

Three American physicists, John Bardeen, Walter H. Brattain, and William Shockley of the Bell Telephone Laboratories, invented the point contact transistor in 1947.

Patents for the three electrode circuit element utilizing semiconductive materials were filed on June 17, 1948. Patent number 2,524,035 was issued on October 3, 1950 to J. Bardeen Et Al. The time span from patent issue to radio production was only four years, a remarkable achievement by I.D.E.A. Regency Division and their component suppliers.

Ross Smith
CTS Corporation
Elkhart, Indiana
September 3, 1983

Our newest members

Wilfred O. Nangle, Milwaukee, WI
Gerald L. Schoen, Kaukauna, WI
William S. Lettow, Tempe, AZ
Henry A. Severson,
Newport Beach, CA
Donald Leick, Dubuque, IA
H. Clayton Kauffman, Jr.,
Pittsburgh, PA
Leonard Meeks, Pearl City, HI
Clifford S. Wates,
Paris, Ontario, Canada
Darbie Lembke, New Castle, PA
Smith Frye, Elkhart, IN
John J. Barabas, Sr.,
Yardville Hts., NJ
Rhyne Killian, Chelmsford, MA
Kenneth D. Metzger,
Colorado Springs, CO
Sam Faust, Changewater, NJ
Robert N. Carlson,
International Falls, MN
Ronnie A. Sommers,
Miami Shores, FL
Bruce Pierce, Jr., Richlandtown, PA
Arthur L. Fox, Lexington, MA
Robert R. Rockwell, Pittsburgh, PA
Tim Reddington, State College, PA
A.C. Jones, Crescent City, CA
Richard C. Dreyfuss, Pittsburgh, PA
Charles L. Pierce, III, Atlanta, GA
John M. McDougall,
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Don McKague,
Teeswater, Ontario, Canada
John Koslowski, Buffalo, NY
Louis M. Starich, No. Tonawanda, NY
Joseph Boutin, Fairhaven, MA
Rudolph Hoffart, Euclid, OH
John Kern, Quakertown, PA
Frank Hutchings, Port St. Lucie, FL
George Drisko, Springvale, ME
Tadayoki Yamada, Hino City,
Tokyo, Japan
Dave Latham, Bellingham, WA
John C. Anthony, Sautee, GA
Carol A. Jessen, Pleasant Hill, CA
Eric von Grimmenstein,
Indianapolis, IN
Stephan Helgesen,
American Embassy, The Hauge,
APO NY
Don Metcalfe, Cumming, GA
Jeane Maggiorotto, Goshen, CT
Joseph Weinberg, Bethesda, MD
Dwayne C. Lewis, Aztec, NM
REINSTATED:
Ashman Stoddard
Joseph Mavaro
John Myers
Oran A.J. Sauder

News From Charleston

The one-day meet we held at the Red Roof Inn in South Charleston, West Virginia, on August 3, was fairly well-attended and some real good buys were available. Thirty-nine registered and the longest distance traveler was from Georgia.

Member Clyde Trivett bought out a collection from a collector who had some time ago lost inerest and had the stuff stored in a garage. A great number of these were choice collector's items and the prices were modest. An advance automobile accessory company Neutrowound, in excellent condition, sold for $100.00 and a superb miniature Baldwin horn speaker went for $40.00.

Near the close of the day, one of our members from out-of-town arrived with his car loaded with books and old magazines. He had several Riders in like-new condition including a hard to find Volume XXIII which I bought to complete my set. He also had copies of Riders monthly publications titled "Successful Servicing" from 1935 to 1953.

The weather was fine and the location under the interstate bridge provided plenty of space and shade. We had a very enjoyable day.

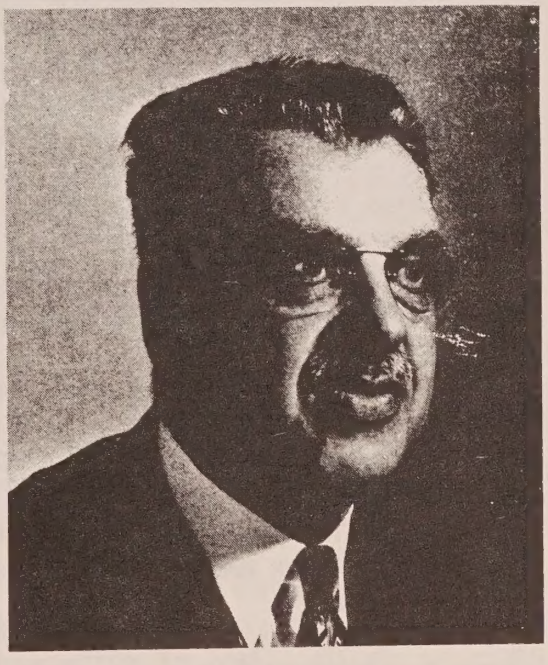
Our antique radio display in the Kanawha County Library during the month of June was well-received and member Jeff Bourne and I were interviewed on a local TV Station to discuss the early days of radio.

We had our June meeting at the home of Jeff and Grace Bourne and looked over their greatly expanded collection. They spent the past eight or nine months in the state of Washington and ran into virgin collector's territory. They took full advantage of the available antiques and just about filled their house. During our one-day meet, we ran tours to their home and to the home of President McIntyre for a viewing of both collections.

The July meeting was held in the new showroom of SESCO Electronics in Charleston, WV. The manager, our President, Lloyd McIntyre, provided the club with refreshments and an interesting evening. We completed our plans for the August 3 one-day meet at the meeting.

On August 24 we will travel to Cannonsburg, Kentucky, to meet with the El Hasa Amateur Radio Club in an all-day affair including a flea market. We will take our mobile bookstore.

J.A. Moore
Editor/Reporter



Last Communication with Clarence D. Tuska"

For some time now I have been a collector of Tuska Receivers and company history. As I acquired more and more Tuska equipment, the fever became more intense. Things last winter really started to roll when at a radio meet, I heard the Mr. Tuska was still alive, living near Hartford, Connecticut. I tried looking up the Tuska family in phone books at the local library, but every thing seemed to come to a standstill. The Tuska family seemed to have disappeared from the Connecticut Valley, until

about two weeks ago when a fellow member and neighbor, Howard Plouf, remembered an article on Clarence D. Tuska in an old AWA Book. Well, finding out that at that time he was living in Cranbury, N.J., I didn't waste any time in writing him a letter. He received it on June 26th, 1985. He and his daughter read the letter and a reply was sent on the following day. This is the letter from his daughter:

Dear Mr. Marciolek,

Thank you for the kind and admiring letter you sent to my dad. He is 88 years old and has been in severe congestive heart failure for about a year now. The various health problems he has had have left him weak and unable to handle letters himself. This is why I am responding to you.

My dad had opened your letter but I was not sure whether he understood what it was all about. When I told him it was from someone who admired him and his early work in radio very much, he seemed so pleased!

Your letter is meaningful to me, not only for its content, but for the "Tuska Radio" trademark. I do not know whether I have anything with this trademark on it, so I will certainly treasure the letter along with special family keepsakes.

Dad is presently living in his own home, but confined to a wheelchair with a 24-hour live-in health aide attending him. (My mother died about 12 years ago.) He cannot do much and his heart condition makes his life pretty much a day-to-day thing. Should you wish to meet him, I think he would be delighted. However, due to the unpredictability of his present health, I would suggest you call me a day or so before, if you'd like to visit, so I can advise you of his condition. Also, we live in a condominium and are expected to advise the gatehouse when we are having visitors.

Sincerely,
Shirley Tuska Jenks

On July 1, 1985, after I received this letter, I was so excited, that in my mind, I was on my way to New Jersey. My next step was to call his daughter to make arrangements for the trip down. She informed me that her father had passed away the night before.

Thomas J. Maciolek
41 Green Point Cir.
Chicopee, MA 01020

Book Review

The Continuous Wave: Technology and American Radio, 1900 - 1932

By Hugh G. J. Aitken 1985 588 pages
Princeton University Press,
41 William St., Princeton, NY 08540
Paperback $19.94
Hardcover $67.50

Not often does a new book appear, dealing with events taking place over a half century ago, that proves essential to the reader's understanding of those events. But *The Continuous Wave* is such a book. It should be in the library of of every Club member who regards himself as a radio historian.

Quoting from the book jacket, Professor Aitken shows how the margin of superiority (in wireless) achieved by the U.S. by the time World War I began, enabled strategically placed individuals in the Navy Department to block the British-based Marconi Company's plans to resume dominance of American radio after the war. The events leading up to the creation of RCA as an instrument of American national policy are described in vivid detail.

The author discusses the origins of broadcasting only briefly. His interest is in the technology that made broadcasting possible, i.e., the tech-

nology of the continuous wave as opposed to the spark-generated wave.

A key chapter is devoted to the activities of Professor Reginald A. Fessenden, a pioneer in the development of continuous wave technology. In late 1899 he delivered a paper before the AIEE and led the discussion on "The Possibilites of Wireless Telegraphy." Joining in the discussion were C.P. Steinmetz, Michael Pupin and W. J. Clark. Out of this interaction came a rigorous scrutiny that the Marconi system had thus far escaped, and an informed search for alternatives. Recognized as a fundamental problem in the Marconi system was its use of highly damped waves which led to very wide bandwidth ("splatter" in the nth degree!), harmonics, interference with other services, and tuning difficulties.

In 1899, the Marconi system was deeply rooted. Much of the leading scientific thought (especially in England, led by Professor Fleming) held that for electromagnetic radiation to occur, one must create an electric displacement in a dielectric, which must be released suddenly – as by the disruptive discharge, across a spark gap, of a condenser. This sudden collapse was thought to result in some of the energy being thrown off into space. These authorities deemed it unlikely that continuous, sine-wave oscillations could be made to radiate Hertzian waves.

Fessenden, coming to wireless telegraphy from a power engineering background, was convinced that the Marconi system of spark wireless was "essentially and fundamentally incapable of development into a practical system" and, further, that a continuous wave was almost indispensable for voice transmission. Fessenden's approach was the alternator. His work with Alexanderson and G. E. on the high frequency alternator is interestingly related. As the alternator's operating frequency and power output were increased, it became a significant part of our worldwide radio communications system, far out-performing the Marconi spark system.

The work of Elwell, Fuller, and the Federal Telegraph Company of California in perfecting and commercializing the oscillating arc system of Poulsen is explored in depth. Federal took the arc transmitter from 100 watts in 1909 to 1,000,000 watts in 1918. By this latter date, G. E.'s Alexanderson alternator had reached a power of 200,000 watts. Meanwhile, British Marconi found itself far behind in the development of both arc and alternator.

A major section of the book (88 pages) deals with DeForest's work on detectors, and the route by which he literally stumbled into his invention of the triode. As the author puts it, "DeForest fumbled his way to creativity." Sadly, DeForest misunderstood completely the modus operandi of his greatest contribution to the field of radio! The subsequent, successful development of the triode vacuum tube by A T & T, G. E., and others is reviewed, with emphasis on land line telephone service and radio telephony.

The book's value is greatly enhanced by the numerous informative footnotes to the author's sources, both published and unpublished. The reader will want to follow up on many of them. Interestingly, some of these footnotes refer to prior work of such AWA and ARCA members as Kaye Weedon, Thorn Mayes, Robert Lozier and Alan Douglas.

Reviewed by Bill Denk

The Power of Advertising

As a club, there has been numerous requests over the years to provide paid advertising in our Gazette. This question has been addressed many times and the answer has been "no." At our annual conference in Niagara, it was decided, after lengthy discussions, to provide separate and apart from the Gazette, an advertising insert. A resolution was proposed and passed by a majority present to provide this service. The first insert will consist of a 4-page folded piece of the same basic size format as the present Gazette. If you are interested, please contact me at the address below for rates and insert sizes. To keep the layout neat, only 1/2 and full page ads will be sold. Proceeds will go 100% (after printing costs) to the national club. We have one full page – full time – advertising commitment made. We trust this will be an added service to the membership and another source of income for your club. I would point out that this in no way affects the "sell and wanted" ad section of the Gazette. The paid advertising insert is for groups or enterprises that wish to reach the membership on a "for profit basis." Your comments will be appreciated.

I would like to thank the many people who helped make the W.VA. Chapter Econo-meet a success. Plans are already being worked out for the next year's event. The gathering was small, but enthusiastic. We set out to prove that small meets such as these can be economized and we proved it! It was my desire to look at every function and related expenses and determine whether it was a necessary expenditure. Our meets for several years have been over budget and the desire by your officers and the membership at our Niagara meet was to bring the quantity and quality of our meets in line with our pocketbook. With the additional experience gained with our W.VA. Econo-meet and past involvement with other meets, I pledge to you to make ARCA '86 profitable for both the membership and your club.

Lloyd E. McIntyre II
4204 Thornapple Lane
Charleston, WV 25312

Kentucky Highlands
Museum Society, Inc.
1516 Bath Avenue
Ashland, Kentucky 41101

Dear Sirs:

The Antique Radio Club of America, Inc., and its officers, wish to express the appreciation of the National ARCA organization for your Society's kindnesses to and cooperation with our active and enterprising West Virginia Chapter. Knowing the guiding officers of that Chapter as we do, we know that this new association will prove beneficial to both organizations.

In token of our appreciation for your Society's services to ARCA and, more significantly, your services in the preservation of the artifacts and history of wireless communication, we are recording your Society as a Special Member of the Antique Radio Club of America and are placing the Society on our mailing list to receive future issues of our quarterly publication, *The Antique Radio Gazette.*

Enclosed is a certificate attesting to your membership in ARCA. Also enclosed are three copies of the Summer 1985 issue of the Gazette which includes (pp 7 & 8) a brief notice, submitted by Lloyd McIntyre, Executive Vice President, concerning your Society together with a photograph of The Mayo Manor. The Fall issue should be in the mail around the end of September. Finally, for your information, we enclose a brochure which briefly explains the objectives of our Club.

Sincerely,
William E. Denk
Secretary/Treasurer

Old-timer's Notebook

James A. Fred ©1985 J.Fred

This time we are going to answer several questions about antennas and the various means available for protecting our radio equipment from lightning, plus other questions of interest.

Since outdoor antennas and earth grounds are used only with radios made in the 1920's and early 1930's, we will refer to textbooks and illustrations of that time.

The usual recommendations for an antenna was to put it up as high as possible and make it at least 100 feet long. This was fine when people lived in rural areas, but because outdoor antennas were unpopular, built-in antennas made their appearance in the mid 30's. Of course the large loop antennas were part of many early radios. However, we will consider only the outside antenna.

Originally a ground rod at least six feet long was driven into the ground under a window near the radio. A lead wire was connected from the radio to the ground rod. The antenna wire, as long as practical, was hung between two glass or ceramic insulators. The other end of each insulator was connected to a wire cable or rope used to suspend the antenna between two masts, trees, or roof tops. A lead-in wire was fastened to one end of the antenna wire and run down to a window near the radio. Two flat copper strips were placed under the lower sash, one for the antenna, and one for the ground lead.

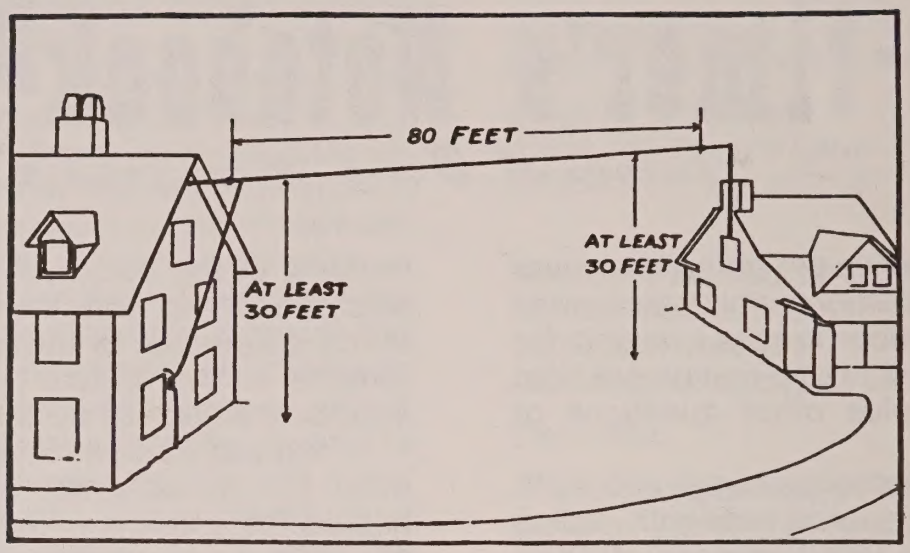
A large single pole, double pole knife switch was mounted on the wall near the radio. One end terminal of the switch was connected to both the radio ground terminal and to the ground rod. The antenna lead-in was connected to the center terminal of the switch. A lead wire was connected from the radio antenna connector to the other end terminal of the switch. One of the illustrations shows how this is done.

When you wanted to listen to the radio, the movable switch arm connected the antenna to the radio. At all other times, especially during thunder storms, the movable arm connected the antenna to the ground. A large knife switch was needed because of the tremendous power in a lightning bolt. It was possible for the lightning to vaporize a small switch.

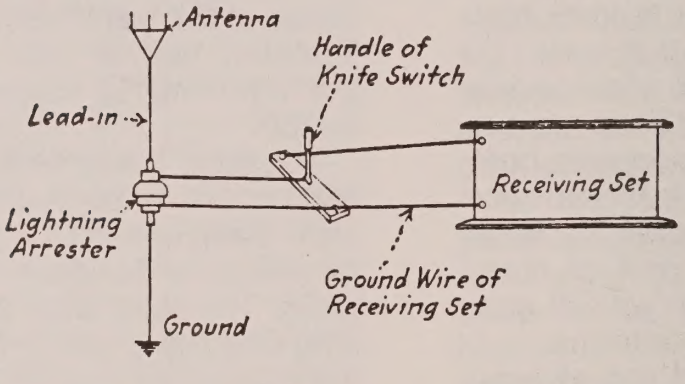
Because the knife switch was inconvenient, and perhaps women were afraid of them, a lightning arrester was soon designed to protect the radio. The illustration shows a lightning arrester and a knife switch, but the switch can be deleted when the arrester is used. Lightning arresters can still be found; in fact, I have several new ones in their original boxes. I also have new glass antenna insulators.

Q. Why do old radio books show split antennas with twisted wire down leads? How do you connect this twin down lead to an ordinary radio set that only has one antenna connection?

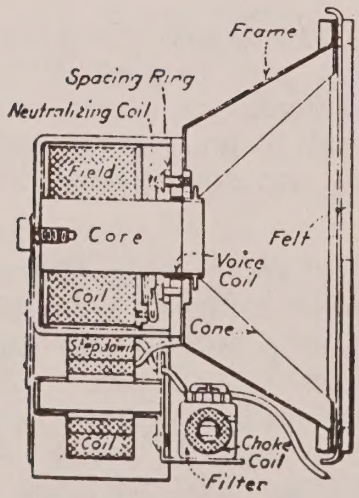
A. For radio transmitters and short wave listening, a Doublet antenna, with a twisted twin lead, was used. The theory behind the twisted lead was: radio interference in the atmosphere would induce signals into the antenna lead-in wires. These signals would progress through the radio circuits and produce noise in the speaker. By using a twisted lead wire, the radio interference would be induced in both wires, but the

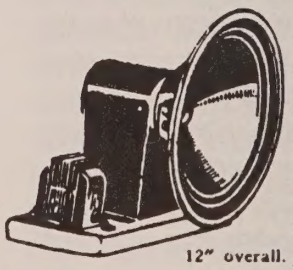


This was the recommended method of installing an outdoor antenna in the mid-1920's.



This is the hook-up to use with a SPST knife switch. It also shows the lightning arrestor.





Jensen D-5 A.C. Dynamic

An ideal speaker for all purposes, has push-pull transformers and reproduces with magnificent volume from any set or amplifier. The use of a 280 tube as a full wave rectifier to supply the field, gives more powerful field with less hum than the usual A.C. speaker. Are designed for heavy duty work, and have powerful field coils

12" overall.

Cat. No. 1707
Our Price **$6.95**
Cat. No. 1708. D.C. Model, 2500 ohm field. Our Price **$4.95**

On the left is a cut-away view of a 1930's electrodynamic speaker. On the right is pictured a popular speaker of that period with its price.

signals being out of phase with each other would cancel out and no noise would appear in the speaker.

If your radio does not have two antenna screws or binding posts, connect one twisted wire to the antenna post and the other to the ground post.

Q. I recently bought an old radio in a wooden cabinet. The set had no tubes, but the sockets were stamped with tube numbers. After putting in new tubes and changing the filter capacitors, I could get some stations. However, there was a howl or whistle as I tuned across the broadcast band. There were small metal collars around three of the tube sockets, the 6D6, 6A7, and 6C6. A friend told me that there should be shields around these tubes. My question has three parts; 1) why are tube shields needed: 2) where do I get tube shields? 3) if I can't buy tube shields, what can I do to make some?

A. When glass radio tubes are amplifying Radio Frequency (RF) signals, there is nothing to prevent the radio signals from radiating through the glass bulb of one tube and mixing with the signals in another nearby tube. These signals are mixed together, and by a process called Hetrodyning, difference frequencies are produced. After these signals pass through the detector, any audible signal frequency will be heard in the speaker.

Radio Frequency signals are blocked by iron, zinc, aluminum, and brass. So if we surround a glass tube with a cylindrical shield, we can confine the signals in the tube and they cannot mix together. The tube shield must be grounded to the radio chassis.

There are several types of tube shields. I've shown several kinds in the illustrations. There was a two-piece, formfitting, tin-plated steel shield made by the GOAT Mfg. Co. This shield consisted of two parts that fit the glass bulb and was held together by a snap ring. Other shields were a round cylinder or square tube that slipped over a metal collar riveted to the chassis. Most shields had ventilating holes punched through the metal to relieve the heat buildup around a tube.

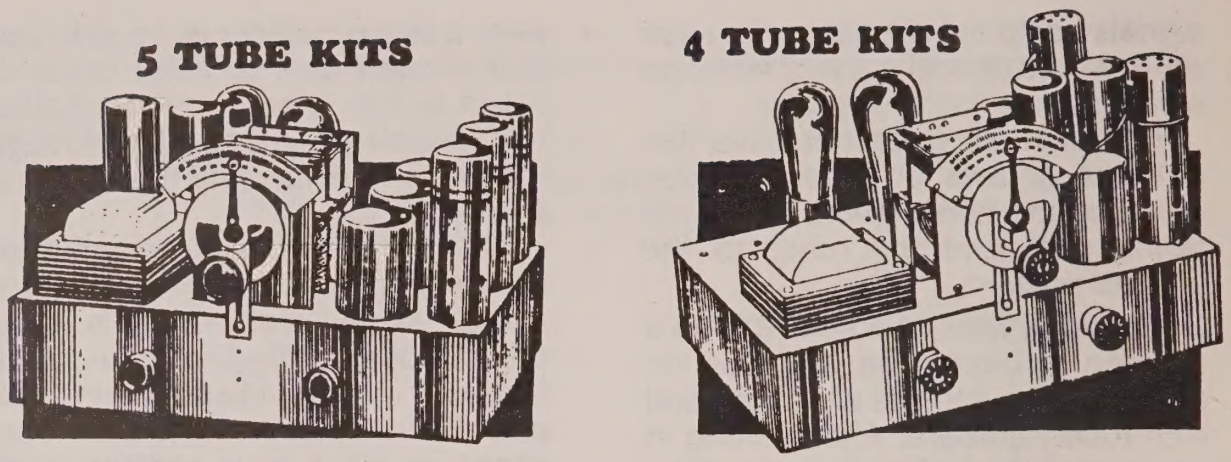
Ready made shields to fit your set will be hard to find. You will need to search at flea markets, ham fests, etc. in hopes of finding them. I fabricate my own round and square tube shields from .025 thick aluminum sheet usually sold in lumber yards, hardware stores, or builders stores. This material is sold as flashing material. Sometimes you can make the form fitting type from heavy aluminum foil. Remember, you must ground the tube shield to the metal chassis!

After you form the tube shield to fit tightly, use a POP rivet gun to hold it together. I have also twisted a piece of bus wire around a shield to hold it in place. If you have glass octal tubes, you can often substitute the equivalent metal tubes which need no shields.

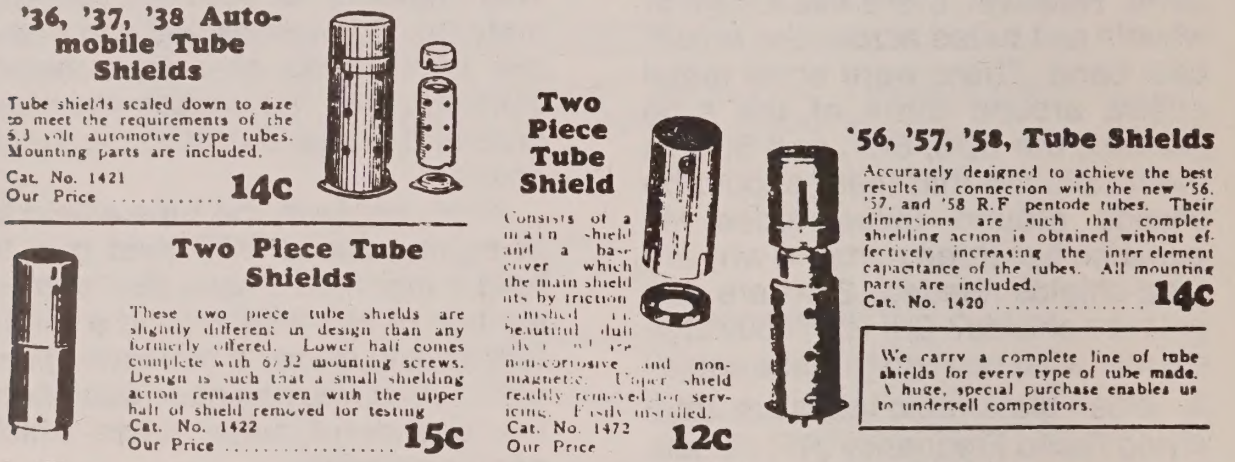
Q. I have a loudspeaker that has a number of cracks and some small holes in the paper cone. Can I patch these holes and cracks or must I replace this speaker?

A. Minor tears or cracks and small holes up to 1/4 inch in diameter can be patched. I use pieces of paper towel cemented in place with speaker cement. Speaker cement can be purchased at a Radio Shack store or other radio-TV parts store.

For a tear, cut a strip of towel 1/2 inch wide and 1/4 inch longer than the tear. Spread cement on each side of the tear to a total width of 3/4 inch wide and a little longer than the tear. Press the patch gently into place and let it dry. When it is dry, spread a thin coat of cement over the complete patch. Use the same procedure to cover small holes in the cone. If the cement becomes too thick to spread evenly, use an approved solvent to thin it.



Looking at these 1930's radio chassis you know that tube shields were important.



Except for the repairs outlined above, I recommend that you send the speaker away to an expert who can install a new cone. This will make the speaker as good as new. One expert I recommend is: Dixie Speaker Repair Service, 545 Shades Crest Road, Birmingham, AL 35226.

Another problem that you cannot repair is an open or warped voice coil. The voice coil is cemented into the center of the speaker cone. An audio signal applied to the voice coil causes the cone to move in and out and thus creates sound waves. The voice coil usually consists of three layers of wire wound on a very light weight form. The voice coil will vary from 1/2 inch to 2 inches in diameter. A speaker cone specialist can also replace a voice coil.

A problem you may be able to do something about is an open or burned out field coil. A speaker made before 1942, having a field coil wound with may turns of fine wire, was called an electro-dynamic speaker. Dynamic speakers made after WWII had permanent magnets to supply the magnetic field. The field coil cover was usually held in place with nuts and bolts. Since most speaker cone specialists will not touch a bad field coil, you may as well attempt a repair yourself. If the coil is open, you may be able to unwind the wire and find the break. If you do, you should be able to solder the two ends together, insulate the joint, and rewind the wire on the coil. Carefully reassemble the speaker and you will probably find that it works again. There will be times when the speaker is missing or cannot be repaired. Then you must replace it with a new permanent magnet speaker. If you are interested in this information, send me a letter and I will include it next time. Keep your cards and letters coming since this is the only way I know what your problems are.

James A. Fred, Rt. 1, Box 41
Cutler, IN 46920

To the editor Antique Radio Gazette (extracted)

The Antique Radio Gazette, Vol. 13, Summer 1985, No. 2, page 5, article titled "A Salute To Some Unique Radios that Won a War" by Evan G. Wallace states: "The truth is, any ionization or radiation ruins solid state and silicon chip equipment, but not oldtime vacuum tubes."

Question: Does an ion generator, which is a box that you plug into your house current or car cigarette lighter plug and emits trillions of electrons to change the air, cause damage? Technically, an ionizer is a high-voltage electronic device, usually supplying between 5000 and 15,000 volts of direct current. This voltage is applied to fine needlepoints, causing them to produce a corona discharge. This means that by putting high voltage onto such a small part, electrons are forced from that point and stream out into the atmosphere. Does this ionization unit [when on] affect solid state equipment? If so, at what distance does the solid state equipment have to be? Does it affect solid state equipment whether on or off?

Mr. Ciro Monaco
P.O. Box 180, Ryder Stn.
Brooklyn, NY 11234

Answer: The ionization referred to in Wallace's article is the result of a nuclear detonation. There are two major forms of damage that can occur in semi-conductors: direct response to radiation (X and gamma), and burnout from insufficiently shielded currents induced by an Electromagnetic Pulse (EMP).

X and gamma rays produced by a nuclear reaction cause damage to semi-conductor lattices by pair generation and by Compton electron generation. Excess current flows in the semi-conductors raising their internal temperatures to the point where the material becomes intrinsic and the semi-conductor effect disappears.

Electromagnetic Pulse is a radio wave that results from high altitude atmospheric (ionospheric) reaction to X radiation. The energetic photons of the Xray cause air molecules to ionize and the accompanying net motion or displacement generates an extremely high level radio wave. When the wave interacts with metallic surfaces, they act as antennas and the resulting current flows until it dissipates. This current will penetrate the circuitry connected to the unexpected antenna resulting in current levels far in excess of the operating values normally found in the circuits. Transistors are damaged by excess currents, perhaps as little greater than 4 times operating levels.

An ion generator such as described in the letter above is not related in the least way to nuclear radiation sources. Further, it cannot reach levels of spatially-correlated ionic count that are even remotely comparable to EMP, and therefore cannot produce a measurable EMP radio wave. With no threat from the smoke purifier, separation is not involved. A smoke purifier can be placed directly adjacent to a transistor radio insofar as damage is concerned. However, corona-generated radio noise, as from fluorescent lights, may suggest separation.

Wallace's point is that radios that use tubes do not contain semi-conductor materials and are therefore useful in military situations where transistors, diodes, and integrated circuits might be very susceptible to damage from radiation effects.

— Ralph O. Williams

Powel Crosley, Jr. Looks Into the Crystal Ball

In 1924, Powel Crosley, Jr. published a booklet titled "Simplicity of Radio." He did a good job of explaining radio, broadcasting, and all facets of the mysterious power that brings the world to your living room. The booklet has eighty pages of simply written information with illustrations of radios and parts, a few schematics of Crosley radios, etc.

A most interesting item is Crosley's look into the future. A page captioned, "A Glimpse of the Future" is as follows: "Could we but glance into a crystal ball and see therein the future of radio, what marvelous sights we would behold. If past history be any indication of what is to happen in the years to come, we may expect new wonders that seem almost too strange even for us to imagine.

When ships are lost far out at sea, their captains need no longer fear, for the radio compass — made possible, by directional radio, or the radio beam — guides them to shore. Someday this principle of directional radio may be extended even to the aid of the wanderer in the desert and the automobile traveler lost on some lonesome road.

The transmissions of photographs by radio is already an accomplished fact. The process takes time, and the picture is transmitted and reproduced part by part. Who knows but that in a few years we will be able to look into some sort of radio device and see, at will, sights in the far corners of the earth.

Much progress has been made toward the transmission of electric power by radio. What does this mean? It means that some day farmers in the most outlying districts from the electric wires and generating plants of urban centers, will be able to have electric lights, and hundreds of other electrical appliances, as easily as the city folks have them today. It means that ocean liners will take their power from generating plants on the shore — traveling everywhere with their holds free to stow away cargo instead of loaded down with tons of coal. It means that automobiles need never run out of gas— motoring the simple, clean electric way, by radio power. It means that houses may be heated thousands of miles away from the generating stations — in short, it means an age as far in advance of this one, as we are in advance of our monkey ancestors."

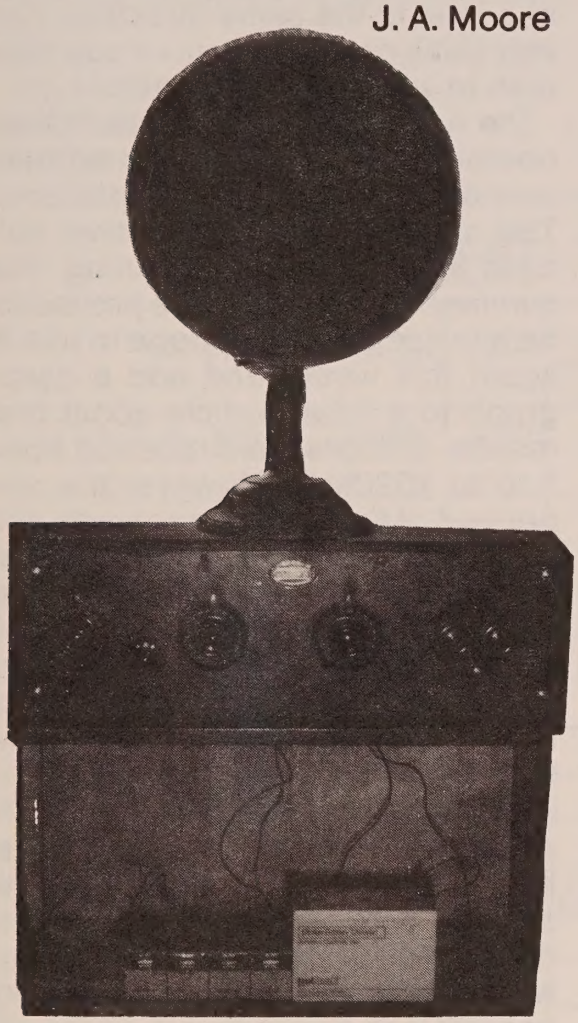
Mr. Crosley's crystal ball was reasonably accurate where it revealed the future navigational aids made possible by radio and the ability to see sights from the far corners of the earth. In 1924, it would be hard, indeed, to foresee the electronic wonders of today. Not only do we routinely see sights from the far corners of the earth, we have witnessed men walking on the moon, men in space ships, and reasonably close up pictures of other planets.

The crystal ball failed to show the electrification of practically every farm in the country, not too many years later, by running wires from central stations. Most ocean liners and railroad locomotives switched from coal to oil, homes are still heated by an in-house heating system and automobiles still run on gasoline or diesel fuel. Radiated electric power for general use is yet somewhere over the horizon, if at all.

I really can't take issue with Crosley on his prophesy of radiated electric power as he saw it — for who knows what the future will bring. However, I do take exception to his referring to my ancestors as monkeys. I like to think of my ancestors from Adam and Eve to my parents as honest, hard-working, courageous and enterprising men and women and that the world benefited by their existence. I just can't see any monkeys in the line at all — the fact is that I never was very good at scampering

up trees or jumping from limb to limb, so I must conclude that none of my ancestors were monkeys.

J. A. Moore



DXING THE A.K. 20 (4640)
by Jim McKinnon

As I use many of my radios, I thought a series of short articles about the use and dxing of the radios might be interesting. As you probably know dxing was very popular in the twenties and it's fun for me to compare actual performance with the advertised claims. However my purpose in writing these articles is not to prove any radio is definitely better than another. There are too many variables encountered in the use of the radios for comparisons, except in general terms.

Operating conditions will be as near original as possible. When this is not possible the changes will be noted. I use batteries to operate my sets, Eveready #763s for B voltages, and a 6 volt 20 amp hour gel cell for a storage battery. Dry cell A voltages and C voltages are provided by a variety of dry cell batteries. The tubes in use will be the tubes recommended by the manufacturer and will test as good as possible. Many tubes will be tried to ensure the best performance of the radio. Two long wire antennas are used, with East-West and North-South alignments. Each set will be operated many times to minimize the effects of weather. My location is in central New Jersey so stations are plentiful, but distance reception can be affected by the locals at times. To help avoid this problem most of my listening is done in the late evening.

For several reasons most of the radios featured will be relatively common ones. Due to the greater availability of parts, these radios are easier to restore to original working condition. As a relative newcomer to collecting, my collection features many common sets. In many cases performance of the radios influenced how many were sold and consequently today's availability.

Let's take a look at the advertising claims for the Atwater Kent company, during the time the A.K. 20 was in production. Unlike most of the competition A.K. made no specific claims as to receiving distances. A direct quote from a Radio News ad for March 1925 reads "Dependable performance day in and day out, has brought to them" (A.K. owners) "a new realization of radio efficiency; a new meaning of the words Selectivity, Sensitiveness, Distance and Volume." The attitude of the Atwater Kent company was, if you owned a quality radio, distance and performance would follow. This advertising style was evident in most of their ads during the mid twenties.

The circuitry of the A.K. 20 is typical of the many TRFs of the twenties, with two notable differences. The grid resistors help to control and prevent oscillation. Their function appears to be related to the

neutralizating condensers in a neutrodyne. The antenna tap switch is also different from typical TRF construction at this time. The purpose of the switch is to enable the operator to have control of the selectivity of the radio. Turning the switch to the left would increase the selectivity but reduce volume. Turning the switch to the right has the opposite effect, with the center position being a compromise between the two.

As my A.K. 20 had not yet been used, it went on the bench to be checked out. After replacing the second audio and grid resistor with parts from junkers, I hooked up the set. The radio operated well, but the RF rheostat had no control over the RF tubes. Pulling the set apart again, the RF rheostat was open and all the tubes were connected thru the Detector-AF rheostat. After fixing the problem, I was ready to operate the radio.

Hooking up the A.K. 20 is fairly easy. Only three voltages must be supplied, 90 volts for the RF and AF plate supply, and 22.5 volts for the detector plate voltage. The filaments require 6 volts. The batteries used were mentioned in the beginning of this article. Connections are easy, everything being clearly marked. The tubes were 5 RCA UX 201a's. Several 200a detector tubes were tried but no advantage was gained by using one. An A.K. M horn was used, except for weak stations when Baldwin Type C headphones were employed.

Operation of the A.K. 20 is simple. Pull the on-off switch out and turn both rheostats about three-fourths of a turn clockwise. Tuning consists of keeping the dials at approximately the same positions and moving the dials very slowly one or two numbers to the left or right until a station is located. After this procedure the rheostats are again adjusted for peak performance. The tap switch may be used to control selectivity and/or volume. Note that this will affect the position of your first RF tuning dial. To find other stations proceed slowly, turning the dials one or two numbers at a time in the same direction. On very weak or strong stations you may wish to adjust the rheostats.

The A.K. 20 performed well. It was operated about 20 hours, spread over 6 nights. I received 30 stations. This may not sound impressive, but bear in mind this was during the summer. Static and noise proved to be a major problem. I hope to use it again this winter and add a paragraph to a future article about the results. Stations were received from 540 to 1520kHz. However the upper end of the tuning range was not very selective. This was true for many of the three dialers of the twenties. It was due to a lack of straight line tuning condensers. The radios of this time very rarely had to tune above 1360 kHz, as very few stations were broadcasting there. Looking at a list of stations from April of 1925, there was only about a half dozen low power stations on the air from 1360 to 1460 kHz. In the direction book for the A.K. 20 stations were listed from 560 to 1070 kHz. In general less stations were on the air and at the time of production, there was no problem with the lack of selectivity at the top of the broadcast band. Distance reception was good. Two stations stand out, CMBC from Havan, Cuba, and CJSB from Ottawa, Canada. Both are 50,000 watt stations, with CBMC being about 1200 miles away.

As promised in the advertising, the A.K. 20 is quality radio. Although not the best dx performer, the simplicity of operation compared with some of the competition, leads me to believe it was a good choice for the average radio fan.

I would like to hear from collectors concerning this article. Should a list of stations be printed? Would the list only be meaningful to someone in the immediate area? Are there sets you would like to hear about?

Can you beat my record on the A.K. 20? Please let me know. Any comments or criticisms can be addressed to:

Jim McKinnon
605 No. Bridge St.
Bridgewater, NJ 08807

ATWATER KENT RADIO LOG NO. Model 20 (4640)

CITY & STATE	CALL LETTERS	WAVE LENGTH	DIAL SETTINGS 1 TAP 1	1 TAP 2	1 TAP 3	2	3	REMARKS
Islip, N.Y.	WLIX	540		95		95	90	Daytime Only
Ottawa, Ont.	CJSB	540		95		95	90	
Philadelphia, Pa.	WFIL	560		87		87	85	
New York, N.Y.	WMCA	570		85		85	81	
Harrisburg, Pa.	WHP	580		81		81	78	
Scranton, Pa.	WARM	590		79		79	75	
Philadelphia, Pa.	WIP	610		73		73	70	
Newark, N.J.	WSKQ	620		72		72	69	
Nashville, Tenn.	WSM	650		65		63	63	
New York, N.Y.	WNBC	660		64		64	62	
Havana, Cuba	CMBC	690	60			58	57	Spanish
New York, N.Y.	WOR	710		53		53	53	
New York, N.Y.	WABC	770		45		45	45	
Allentown, Pa.	WAEB	790		46		44	44	
Camden, N.J.	WTMR	800		43		43	44	Daytime Only
Murfreesboro, Tenn	WMTS	810		39		39	41	Daytime Only
Schnectady, N.Y.	WGY	810		41		40	40	
New York, N.Y.	WNYC	830		40		40	42	
New York, N.Y.	WCBS	880		36		35	39	
Hamilton, Ont.	CHML	900		36		36	37	
Trenton, N.J.	WTTM	920		32		32	34	
Rochester, N.Y.	WBBF	950		35		31	34	
Hackensack, N.J.	WWDJ	970		31		30	33	
New York, N.Y.	WINS	1010	31			29	30	
Boston, Mass.	WBZ	1030	30			26	30	
Stirling, N.J.	WKMB	1070	20			26	29	Daytime Only
New York, N.Y.	WNEW	1130	25			20	25	
Bridgewater N.J.	WBRW	1170		20		20	25	
Philadelphia, Pa.	WCAU	1210	25			22	26	
Buffalo, N.Y.	WKBW	1520	20			10	10	

Ye Old SWAP SHOP

All ads and Swap Shop items are printed in the Gazette free of charge. We do ask that you write your ad on a separate sheet of paper, type if possible, or print, and to be sure to include your name and address. We reserve the right to edit all ads. ARCA is not responsible for any transactions, of course.

WANTED: Hallicrafters catalogues, literature and following sets. Models S-1-S2-S3-S/SX 4-5-6, S-7-S10-S-11-S14-S18-SX16, S-30, S35-SX88-SX100 or SX96, HT-1-HT-4, HT18-HT-S. Please give condition and prices.

Max D. De Henseler, Tudor City Place
333 East 43rd St., New York, NY 10017

FOR SALE: Many sets and parts available. Send SASE for current list.

R. Chester Wisner, 1014 Main Street
Dalton, MA 01226

ARCA IN NEED OF FUTURE ARTICLES FOR PUBLICATION! Tell us of your collection and describe unusual items you have found. What is your favorite prize item? Any background of early manufacturers you know of?

Editor, John Drake

FOR SALE: Clearing out a collectors estate. Many sets and parts. Send SASE for current list.

Ray Klusewitz, 825 N. 2nd Street
Reading, PA 19601

WANTED: Unusual plastic radios before 1955. State condition and prices. Working or not, we are interested.

John Poster, 29 Crescent Ave.
Totawa, NJ 07512 Tel: 201-785-4182

TRADE: Museum quality Marconi 106B crystal rcvr for other Marconi or United Wireless items. Also want IP-76 DeForest Responder or other rare wireless. Can anyone provide info re Elmo Pickerill's Aircraft RX/TX (rotary) which was sold at Canandaigua over a decade ago?

Richard Groshong, 6604 Kent Drive NE,
Cedar Rapids, IA 52402 Tel: 319-377-3144

FOR SALE: I have a quantity of Automatic Radio portables in factory sealed cartons. They are Models TT600 (Hybrid) and TT528 (Tube). Both are "Tom Thumb" models made in 1956. Priced at $25 ea. (includes U.P.S.)

Herb Parsons, 5 Surrey Lane,
Peabody, MA 01960 Tel: 617-535-1009

WANTED: Zenith 9S232, 9S244 or sets with chassis 5905. Need not be working. Interested in Zenith Volumes 1, 2 (or combined 1 & 2) and other printed Zenith materials.

A. Paul Winans, 3915 S. Ward Rd.
Lee's Summit, MO 64063

TRADE: WD-11 (good filament), other tubes, for AK mounted variometer no. 3714.

Kent King, 3637 Liberty Road
Delaware, OH 43015 Tel: 614-363-3219

FOR SALE: Msc. assortment of Marconi 101 panel parts, msc. 106 parts. Empty Kennedy box, Amco, Halcun, Marconi rheostats & Pots. Old Variometers & Variocouplers. National MB-40-SL multi band tank. Five band 50 watt Turret coils. Radiola 24 complete front panel with all good parts. Lots of msc. Radiola parts. Speakers Horn type, cabinet type with horn coiled up inside, cone speakers. Msc. good driver units. Microphones. Tube testers. "B" battery eliminators. Large size SASE for lists.

Joe Horvath-W6GPB, 522 Third St.
San Rafael, CA 94901

Suggestion: a blurb on replying to responses to ads wanting a whosis for a whatsis. One writes and says "I've got one and I'll sell it for X dollars," and NEVER gets the courtesy of a reply. Disgusting and discouraging to the avid collector trying to help.

Stan Lopes
1201-74 Monument Blvd.,
Concord, CA 94520

WANTED: Philco Predicta TV's, Pilot TV's, and/or a replacement Predicta tube #21EAP4.

John Okolowicz, 836 Sunnyside Ave.
Audubon, PA 19407 Tel: 215-539-6997

WANTED: 1946 Zenith Model 5D011Z. National Model NC-57.

Bob Rockwell, 508A Geyser Rd.
Pittsburgh, PA 15205

WANTED: Martin Autoplex or Hulitt keys, also other "Bugs" telegraph and wireless keys. Will trade antique radios or parts for keys or buy outright.

Bill Holly, 324U. Haley Rd.
Kittery Pt., ME 03905 Tel: 207-439-3115

LIMITED SUPPLIES: Sell new 6L6-G @ $3.00 each. Metal @ $5.00 each.

Milton Levy W5QJT, 4141 Krupp Drive, Apt. 1
El Paso, TX 79902 Tel: 915-532-2509

WANTED: Chassis and speaker for Majestic 15 and for Audiola 23-S-8.

Doug Heimstead, 1349 Hillcrest Dr.
Fridley, MN 55432

WANTED: Old tubes and audio equipment 50, 250, 350, 45, 245 etc. Western Electric speakers and audio components W.E. 242A/C, 252A, 262A/B, 274A/B, 275, 284A, 300A/B, 350B, 4 and 5 pin ceramic tube sockets.

Charles Dripps, 4331 Maxson Rd.
El Monte, CA 91732 Tel: 818-444-7079

WANTED: Tube type & replacement chart for Sparton Model 39. Also copy of instruction manual originally supplied with these radios.

John McDougall, 53-2401 Ord Road
Kamloops, B.C. V2B-7V8 Canada

WANTED: Schematics for the following six-tube Ford car radios: Bendix OA-18805-A1 Model OBF (1950). Bendix FDH-18805-B1 Model 5BF (1955).

Bill Denk, 81 Steeplechase Road
Devon, PA 19333

FOR SALE: Neutrowound super-six, Kennedy IV, Radiolas 26 and 20, Radiola II, Atwater Kent Models 20-33-35.

Call Toll-Free: 1-800-323-1284
9 AM – 4 PM, Charles Barone

WANTED: Radios in the shape of rockets or other space vehicles; Sony radios; TR-55, TR-62, TR-63, TR-610 and TFM-151, Sony televisions, 8-301 & 5-303; Fisher table top projection TV set and sales literature & advertising for any of the above.

Randy Liebermann, 305 E. 40th Street
New York, NY 10016 Tel: 212-867-5747

WANTED: Old transmitting tubes, amateur or commercial. Help preserve old bottles for future generations to study and admire.

Ye Olde Transmitting Tube Museum
P.O. Box 97, Crescent City, CA 95531

WANTED: IP501 or IP501A in good condition. Have as trade item Amrad double decker excellent condition, (working) or cash.

Andrew Mooradian, 5 Priscilla Lane
Winchester, MA 01890

WANTED: Pocket Radio Guide (published by Gernsback Publications), Radio News, and a Majestic Model 85 table model.

Vernon Oehlke, Box 307, Sollar Heights Rd.
Ghent, New York 12075 Tel: 518-392-4945

WANTED: For National RAS-4 (HRO) rack mounting speaker, #CNA49105. Have HRO coil CNA47157, 450-900KCS and some mechanical parts for trade. Tyne's "SAGA," hard cover, perfect, $10. plus postage.

Charles A. Days, 30 Sagamore Drive
S. Dartmouth, MA 02748

FOR SALE: Solid state AM broadcasters so you can play old radio shows and tune them in on that old battery or AC set, $11. PPD. Send SASE for list of radios, etc., for sale.

Stan Lopes, 1201-74 Monument Blvd.
Concord, CA 94520

FOR SALE: Victor Orthophonic 9-40 Electrola-radiola, Clapp Eastham, Echophone V3, Hopalong Cassidy radio, horn speakers, much more, SASE for list.

Greg Farmer, 71 Rice Creek Way
Fridley, MN 55432 Tel: 612-571-6062

FOR SALE: Freed-Eismann NR5 with tubes and large Bristol horn. $150 or best offer. Write:

Mrs. John Maggiorotto, 1585 Torringford Rd.
Torrington, CT 06790 Tel: 203-482-7220

WANTED: Good plastic cabinet/and glass dial face for Stromberg Carlson Model 1101 Series 13-E, or will sell chassis works/very good. Also dial face (very good to ex condition only) and pointer for Gilfillan Bros. Model 16-F.

Dave Lathom, 2410 Walnut
Bellingham, WA 98225 Tel: 206-733-6641

WANTED: Atwater Kent Electric Sets (metal box and wood), Radio Retailing magazines, grandfather clock radios, Philco 70 & 90 Cathedrals, interesting table models to 1935.

John Kern, R.D. #2, Box 457
Quakertown, PA 18951 Tel: 215-538-2128

FOR SALE: Tuska Type 187 osc. coil, $15. Dresner s/w converter with coils, mint, $60. Heathkit SB-310 (no sideband) $75. National 1-10 with power supply & coils $75. Plug-in crystal detector, $10. Radio station mike, $75, (with call letters).
WANTED: base for Music Master horn, Kennedy 220, early one-tubers & wireless items.

Bill Hoffman, 2570 Falcon Street
East Meadow, NY 11554

WANTED: Radio Amateur News/Radio News 1919-1922 issues. Wireless books, wireless gear & early tubes (pre-1925). Please specify condition (tubes have filaments?) issue date if a publication, & price. Reasonable prices paid promptly and all letters answered.

Marc Gottllieb, 931 Olive St.
Menlo Park, CA 94025

FOR SALE: Try me for tubes. Most types available. Ham antennas cut to any frequencies with insulators, etc.

Ed Trella, 100 Valley View Drive
Meriden, CT 06450

FOR SALE: New Items . . . power transformers for sets with 2.5 volt filament tubes. Upright or half shell mounting. For sets with 4 to 5 tubes, $32.50. For sets with 6 to 9 tubes, $39.00. I also have lacquer sticks for engraved panels or knobs, $3.25. Write:

Peter Yanczer, 835 Bricken Pl.
St. Louis, MO 63122

NOTICE

Our secretary/treasurer, Jane and Bill Denk, need the current mailing addresses for the following paid-up members whose Gazettes are being returned by the Post Office.

John Kent Allison (last address E. Patchogue, NY) and Mike Kreuzer, Evanston, Illinois.

Radiofest '85

Clear skies and temperatures in the 80's greeted the early birds who began arriving Thursday morning, August 8th prior to the official opening of Radiofest '85, held at the fabulous Clock Tower Inn and Convention Center in Rockford, Illinois. Friday saw the temperature soar to the mid 90's, as caravan upon caravan began to arrive. Jacques Dubois from Neuilly, France, and Shinji Sito from Tokyo, Japan, headed up the group of overseas collectors. The tandem of John Caperton and Ralph Muchow was very active during the two day market. And what a market! Marconis from a 1939 Canadian Marconi console to a WWI trench receiver to a 106B-, IP501 and IP501A, etc. Many early magazines and advertising pieces appeared along with speakers and the usual mounds of tubes and parts. Friday also saw the opening of the advertising display presented by The Antique Radio Club of Illinois, and a superb show and tell–"Radio Wrinkles" by Larry Wright and George Hausske.

Saturday saw many local collectors arrive. Final tabulations showed four hundred collectors with ninety-five being sellers in the flea market. Special presentations included John Topol on Reginald Fessenden and John Wolkonowiscz on Atwater Kent. The contest was well attended with over thirty (30) sets competing for honors in ten catagories. Saturday's festivities concluded with a banquet

and awards ceremony MC'ed by Ralph Muchow. Joe Slattery was our special guest who entertained us with stories about the staff announcers in the early days of radio.

Just a note – Radiofest is now a year-round project of planning and preparation. However, all the planning and preparation mean nothing if the collectors do not support it. With your continued support, we will make Radiofest one of the premier events in the country. Thank you for your support from the Radiofest Committee: Joe Willis, Chairman, Larry Wright, George Hausske, Ralph Muchow, Randy Renne, and Barry Janov.

Antique Radio Club of America, National Conference, Grand Island, NY June 7, 1985

Class I: Crystal Sets: First, MESCO 458, Mike Feher: Second, Nesco Cohen, Ralph Muchow: Third, Telefunken, Robert Lozier: Honorable Mention, Quaker Oats, Floyd Engels.

Class II: Regenerators: First, Telefunken, Mike Feher: Second, Monroe D7, Edward Lewis: Third, DeForest Crosley 52, Jim & Felicia Kreuzer.

Class III: R. F. Amplifiers: First, AMRAD, Art Albion: Second, Atwater Kent 12, Larry Babcock: Third, Crosley RFTA, Geoffrey Bourne.

Class IV: Superhets: First, Mercury Super 10, Larry Babcock: Second, Radiola 24 Experimental, Larry Babcock: Third, Western Electric 4B, Art Albion.

Class V: Advertising: First, and Best in Show, Atwater Kent Display, Ralph Muchow: Second, Spaulding Panel, Larry Babcock.

Class VI: Test Equipment: First, Chauvin & Arnoux ohm meter, Larry Babcock.

Class VII: Consoles: First, Ward 62-311, Fred Schultz.

Class VIII: Meters: First, Robbins Martin Galvo, Art Albion: Second, K & D Ammeter, Les Raynor: Third, Gaiffe, Hoyt & Wappler, Floyd Engels: Honorable Mention, McIntosh Ammeter, Ken McIntosh.

Class IX: Federals: First, Model No. 161, Larry Babcock: Second, Model No. 9, Merrill Bancroft.

Class X: Speakers: First, Lenzola Marble Horn, Ralph Muchow: Second, Hartman Pedestal, Fred Schultz: Third, Brown Horn, Jim & Felicia Kreuzer.

Class XI: Buffalo Manufactured: First, Colonial/Sears, Larry Babcock.

Class XII: Canadian: First, Westinghouse 53, Larry Babcock: Second, CGE/Radiola III, Floyd Engels: Third, CGE/Radiola I, Mike Feher.

Judges: Charles Byns, Dick Brewster, Randy Renne, Ross Smith, Geoffrey Bourne, Jim Kreuzer, Ralph Williams.

We hope all our members like our new art work and we are again indebted to Jack Warren who lives in Fairfield, CT and is a commercial artist.